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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/726,379	12/03/2003	Frederic Guerin	PO8040/PS-1136	5580
34947	7590	12/13/2007	EXAMINER	
LANXESS CORPORATION 111 RIDC PARK WEST DRIVE PITTSBURGH, PA 15275-1112			FIGUEROA, JOHN J	
			ART UNIT	PAPER NUMBER
			1796	
			MAIL DATE	DELIVERY MODE
			12/13/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/726,379

**Applicant(s)**

GUERIN ET AL.

**Examiner**

John J. Figueroa

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 6-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Amendment*

1. The 35 U.S.C. 103(a) rejection of amended claims 6-14 as unpatentable over USPN 6,268,417 B1 to Ozawa et al. (hereinafter 'Ozawa') in view of USPN 5,683,819 to Mori et al. (hereinafter 'Mori') has been maintained for reasons previously made of record in items 4 and 18 on pages 2 and 16, respectively, of the Office Action of March 26, 2007 (hereinafter 'OA').
2. The obviousness-type double patenting rejections over USPN 6,780,939 to Guerin (hereinafter 'Guerin'939') and over USPN 7,105,606 (hereinafter 'Ong'), previously made of record in items 6 and 7 on pages 3 and 4, respectively, of OA, have been withdrawn in view of the submission of corresponding Terminal Disclaimers with Applicant's response to OA filed September 26, 2007 (hereinafter 'Response').
3. The obviousness-type double patenting rejections over copending U.S. Application Serial Numbers 10/684,867 and 10/926,532 previously made of record on pages 4 and 5, respectively, of OA have been rendered moot, and thereby withdrawn, in view of Applicant's cancellation in Response of the claims that were rejected.
4. The obviousness-type double patenting rejections of claims 6 and 9 as unpatentable over claims 6 and 7 of copending Application No. 10/878,080 ('080 app) has been maintained for reasons previously made of record in item 9 on page 5 of Response.

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5. The 35 U.S.C. 102(b) rejections as anticipated by Guerin'939, by Ong and by United States Patent Application Publication Number 2004/0113320 A1 to Guerin (hereinafter 'Guerin'320') previously made of record in items 11-13 on pages 6-10 of OA have been withdrawn in view of Applicant's amendment to the claims in Response.

6. The 35 U.S.C. 103(a) rejection of amended claims 6, 7 and 10-13 as unpatentable over Mori has been maintained for reasons previously made of record in item 15 on page 10 of OA.

7. The 35 U.S.C. 103(a) rejection of amended claim 8 as unpatentable over Guerin'939 or Guerin'320, either in view of United States Patent Application Publication Number 2003/0171500 A1 to Guo (hereinafter 'Guo') of record in item 16 on page 13 of OA has been withdrawn.

***Claim Rejections - 35 USC § 102***

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claim 6 has been amended to be the sole independent claim and interpreted as limiting the adhesive polymer composite of the self-supporting shaped article to contain a nitrile polymer, that is optionally hydrogenated, and having a Mooney viscosity below 30 that is layered on (or interposed between) supporting means. Examiner notes, however, that this "optionally" limitation was present in the original claims examined in the first Office Action of January 25, 2006. Applicant had subsequently amended the claims (filing of May 25, 2006) to delete this "optionally" limitation.

Accordingly, in view of Applicant's attempt to "recapture" subject matter previously deleted from the claims, the rejections previously made of record in the aforementioned first Office Action are hereby reinstated and are presented herein in their entirety as follows for Applicant's convenience.

10: Claims 6, 7, 9 and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 2,714,562 to John F. Hechtman (hereinafter 'Hechtman').

Hechtman discloses a composition, used as a self-adhering material, containing a mixture of a natural rubber resin and a low-molecular weight acrylic nitrile-butadiene copolymer that exhibits excellent adhesion, has good cohesive properties and adheres to paper, cellophane, metal and the like. (Col. 2, lines 35-43.)

Hechtman further discloses that the acrylic nitrile copolymer has a Mooney viscosity between 10 and 35 at 212°F (100°C) and that it can be made by the polymerization in aqueous emulsion of a monomeric mixture consisting of a butadiene monomer and 20-50% of acrylonitrile. (Col. 2, lines 41-55).

In addition, Hechtman discloses a self-sealing wrapping paper containing a wrapping sheet and the self-adhering material discussed above as an adhesive coating. (Col. 1, lines, 15-25; col. 2, lines 3-22 and col. 4, lines 36-53).

Thus, the claims are anticipated by Hechtman.

11: Claims 6-14 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 3,600,268 to Hori et al. (hereinafter 'Hori').

Hori disclose a surface protective sheet comprising a plastic sheet layer (e.g. PVC) and an adhesive layer provided on one side of the plastic sheet, wherein the adhesive layer comprises a cured acrylic rubber having a Mooney viscosity of 20 or more at 100°C. (Col. 1, lines 11-29; col. 2, lines 53-63; col. 8, line 71 to col. 9, line 8).

Hori also discloses that the acrylic polymer can be cross-linked comprises a copolymer of an ester of acrylic acid and acrylonitrile. (Col. 2, line 54 to col. 3, line 5; col. 9, lines 1-7).

Hori further discloses that a low-friction layer, such as those conventionally used for the backing surface of a pressure sensitive adhesive tape, can be applied to the surface of the protective sheet and rolled to form a roll (tape). (Col. 3, lines 44-65).

Example 4 in Hori discloses an acrylic-nitrile adhesive copolymer prepared by forming an emulsified mixture of acrylonitrile, butyl acrylate, ammonium peroxide, sodium metabisulfite and sodium laurate. The acrylic-nitrile rubber formed had a Mooney viscosity of 24 at 100°C. (Example 4; col. 8, lines 15-55). The acrylic-nitrile rubber was applied to a PVC film using dicumyl peroxide to form a coated sheet. (Example 4; col. 1, lines 32-47)

Thus, the claims are anticipated by Hori.

12. Claims 6-10 and 12-14 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 2,656,292 to Hoover (hereinafter 'Hoover').

Hoover discloses liners for use in the handling, storage and transportation of tacky materials to prevent the sheets from adhering to each other wherein the liners can be used in preparing rolls (tapes) of tacky sheet rubber. (Col. 1, lines 1-11; Figure 3)

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The liner can contain a homogenous mixture of a vinyl halide polymer with an interpolymer of a butadiene-1,3 hydrocarbon and an acrylic nitrile. (Col. 2, lines 34-52).

The interpolymer contains a copolymer of butadiene-1,3 and acrylonitrile have a Mooney viscosity as low as 3-20 at 212°F (100°C) and preferred low viscosity interpolymers have a Mooney viscosity value below 35. (Col. 3, lines 30-54; col. 3, line 71 to col. 4, line 10; col. 6, lines 42-57)

In Example III, Hoover discloses a latex-like aqueous dispersion containing 30 parts of a butadiene-1,3 acrylonitrile copolymer having a Mooney viscosity of 15-20 prepared by mixing 66% butadiene 1,3 and 33% acrylonitrile. The copolymer solution is subsequently mixed with a PVC dispersion to form an interpolymer that is used to form a flexible film. (Col. 3, lines 1-9; col. 4, line 55 to col. 5, line 2).

Thus, the claims are anticipated by Hoover.

### ***Claim Rejections - 35 USC § 103***

13. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

14. Claims 6-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guo in view of Guerin'939, Ong *or* Guerin'320.

Guo discloses seals for situations where severe stress is encountered, high stiffness automotive belts, roll covers, and hoses which are formed from hydrogenated nitrile rubber polymers (HNBR) displaying good adhesion at both low and high temperature. (Abstract; page 3, [0030])

Guo further discloses that HNBR polymers have good adhesion to materials, such as woven and non-woven fabrics, metals, plastics, natural fibers and synthetic fibers; at difficult, elevated temperatures. (Page 3, paragraph [0031]). Particularly, the high modulus and high abrasion resistance of HNBR polymers render them useful for high-hardness roll applications (tape) in, for instance, metal-working rolls, paper industry rolls, printing rolls, elastomer components for looms and textile rolls. (Page 3, paragraph [0032])

However, Guo does not explicitly disclose the Mooney viscosity for the nitrile rubber copolymer of the polymer composite article (e.g., tape), particularly, a Mooney viscosity below 30 as recited in the instant claims

Guerin'939, Ong and Guerin'320 were discussed previously in items 11-13 on pages of 6-9 of OA, respectively, and the arguments therein are included herein in their entirety.

Guerin'939, Ong and Guerin'320 all teach HNBR polymers having a lower molecular weight and a lower Mooney viscosity (each disclosing Mooney viscosities below 30) than conventional HNBR polymers (which have MW of 200,000 to 5000 g/mol and Mooney viscosity in the range of from 55 to 105), wherein said lower Mooney viscosity is taught by these references to provide the HNBR compound with superior processability to conventional HNBR compounds when forming composite (such as a seal, hose, pipe seal or footwear component) by, e.g., injection molding. (Guerin'939, col. 1, lines 31-45 and col. 3, lines 15-30; Ong, col. 1, lines 42-53 and col. 2, lines 11-39; Guerin'320, page 1, [0004] and page 2, [0007] to [0010])



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Therefore, it would have been obvious to a person of ordinary skill in the art at the time that the present claimed invention was made to choose a HNBR polymer having low Mooney viscosity (e.g., below 30) as the nitrile rubber polymer component when forming the roll (layered tape) in Guo. It would have been obvious to one skilled in the art to do so to attain a resultant tape roll that can be efficiently manufactured due to having excellent processability as taught by Guerin'939, Ong *or* Guerin'320.

Thus, the instant claims, as amended, remain unpatentable over Guo in view Guerin'939, Ong *or* Guerin'320.

### ***Response to Arguments***

#### ***The Nonstatutory Obviousness-Type Double Patenting Rejections (items 6-9 on pages 3-5 of OA)***

15. Applicant's arguments filed regarding the obviousness-type double patenting rejection over Guerin'939 and Ong have been considered but deemed moot due to the withdrawal of these rejections in view of the filing of corresponding Terminal Disclaimers with Response.

16. Applicant's arguments filed regarding the double patenting rejections over copending U.S. Application Serial Numbers 10/684,867 and 10/926,532 have been considered but deemed moot due to the withdrawal of these rejections in view of Applicant's cancellation of the rejected claims.

17. Applicant did not present arguments in Response traversing the grounds of the obviousness-type double patenting rejection of instant claims 6 and 9 over claims 6 and 7 of copending U.S. Patent Application Serial Numbers 10/878,080.

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Accordingly, this obviousness-type double patenting rejection has been maintained.

*The 35 U.S.C. 103 Rejection over Ozawa and Mori (item 4 on page 2 of OA)*

18. Applicant did not present any arguments in Response specifically traversing the 35 U.S.C. 103(a) rejection of claims 6-14 as unpatentable over Ozawa and Mori (discussed previously in items 4 and 18 of OA, in addition to item 8 of the Office Action of August 15, 2006). [Examiner notes that Applicant's arguments in Response traversing the separate 103 rejection over Mori (item 17 of OA) are addressed below in the instant action.]

Consequently, this obviousness 103 rejection over Ozawa and Mori has been maintained.

*The 35 U.S.C. 102 Rejections over Guerin'939, Ong and Guerin'320 (items 11-13 on pages 6-9 of OA)*

19. Applicant's arguments in Response traversing the 35 U.S.C. 102(b) rejections as anticipated by Guerin'939, by Ong and by Guerin'320 have been considered but deemed moot due to the withdrawal of these rejections in view of Applicant's amendment to the claims requiring the adhesive polymer composite to be layered on, or interposed, between supporting means of the self-supporting article.

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*The 35 U.S.C. 103 Rejection over Mori (item 15 on page 10 of OA)*

20. Applicant's arguments in Response traversing the 35 U.S.C. 103(a) rejection of claims 6, 7 and 9-14 as unpatentable over Mori have been fully considered but deemed unpersuasive.

Applicant's arguments, concerning Mori not disclosing the nitrile rubber polymer as layered (or interposed) in the disclosed composite article, are incorrect. As stated in the first paragraph on page 12 of OA, Mori discloses glass fiber cords coated ("laminated") with a sheet of the rubber formulation. (See e.g., Mori, Examples 1-5 and Table 6) In addition, Examiner respectfully draws Applicant's attention to col. 9, line 64 to col. 10, line 5 of Mori expressly disclosing laminating the nitrile group-containing rubber copolymer with a fibrous material.

Thus, the instant claims, as amended, remain unpatentable over Mori.

*The 35 U.S.C. 103 Rejection over Guerin'939 or Guerin'320, either in view of Guo (item 16 on page 13 of OA)*

21. Applicant's arguments in Response traversing the captioned 35 U.S.C. 103(a) rejection of claims 6-14 as unpatentable over either Guerin'939 or Guerin'320, in view of Guo have been considered and deemed persuasive. Therefore, this rejection has been withdrawn in favor of the new grounds of rejection presented above.

***Conclusion***

22. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

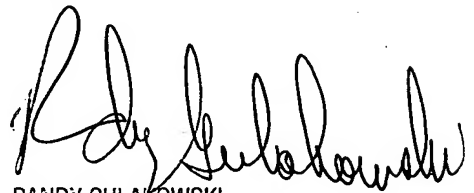
Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Figueroa whose telephone number is (571) 272-8916. The examiner can normally be reached on Monday-Thursday 8:00-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JJF/RAG



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